

Photo credit: KRGV-TV-5



Feast?

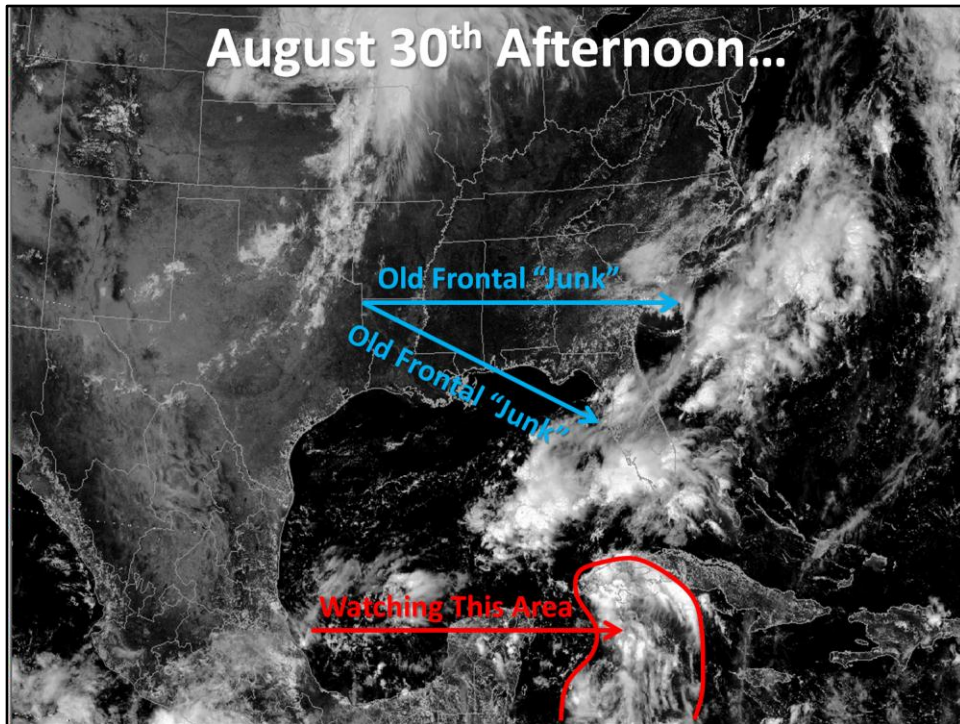


Or (more)
Famine?

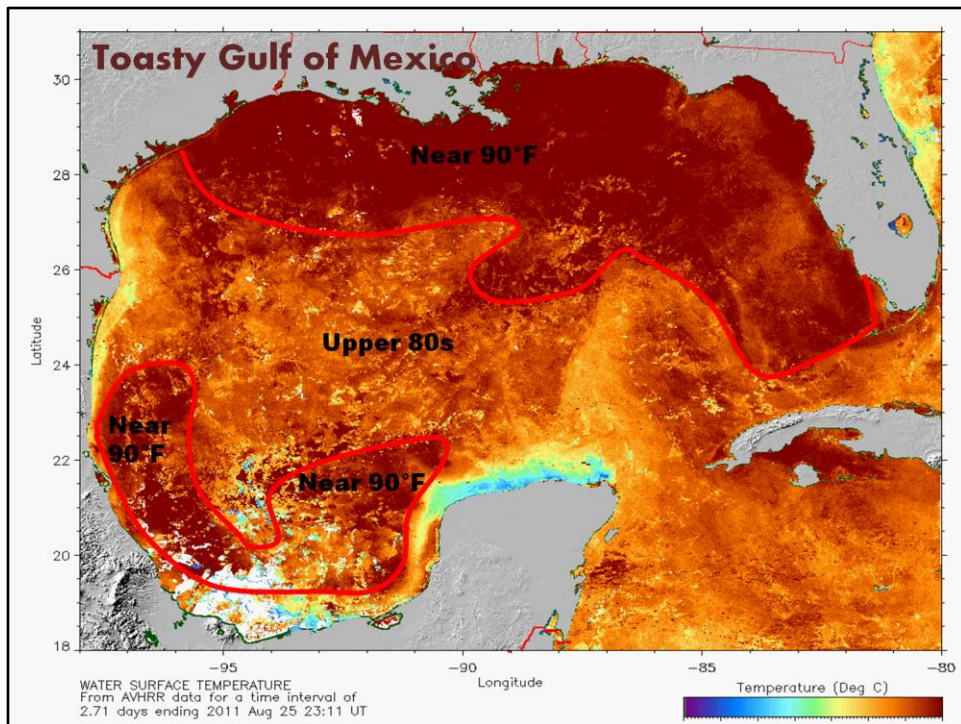
**What the 2011 Labor Day Weekend
Might Bring To the Rio Grande Valley**

The Setup

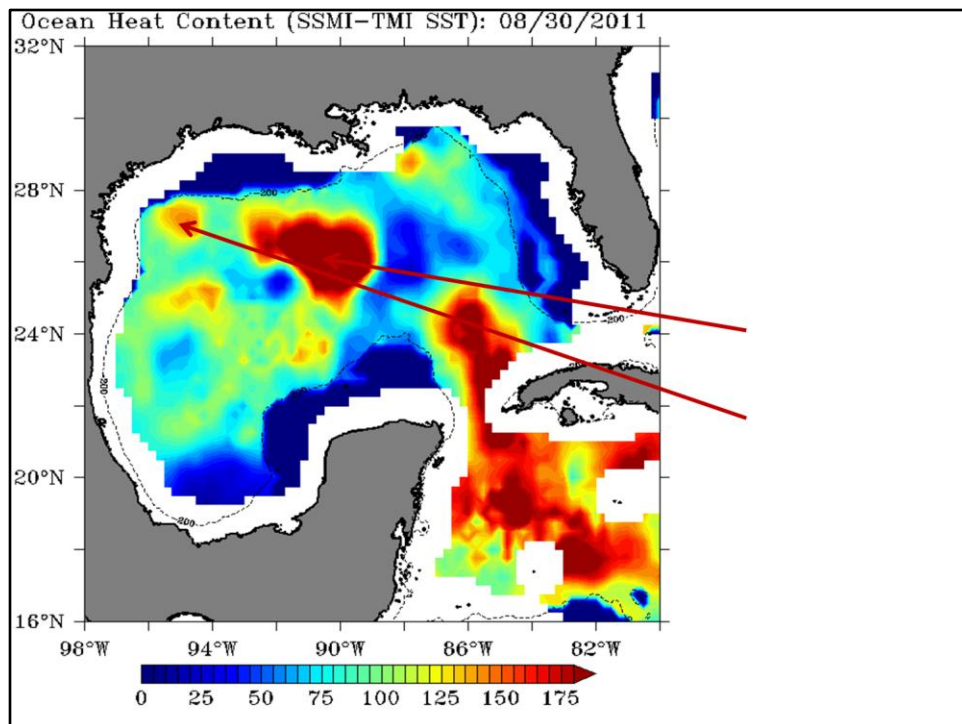
- Weather pattern changes
- Tropical Moisture will invade the central and western Gulf
- Potential Exists for a LOT of rain, somewhere...
- ...but potential exists for another round of searing heat, somewhere.
- Uncertainty is very high on August 30th
- Tropical Storm or Hurricane? Be prepared and stay tuned.



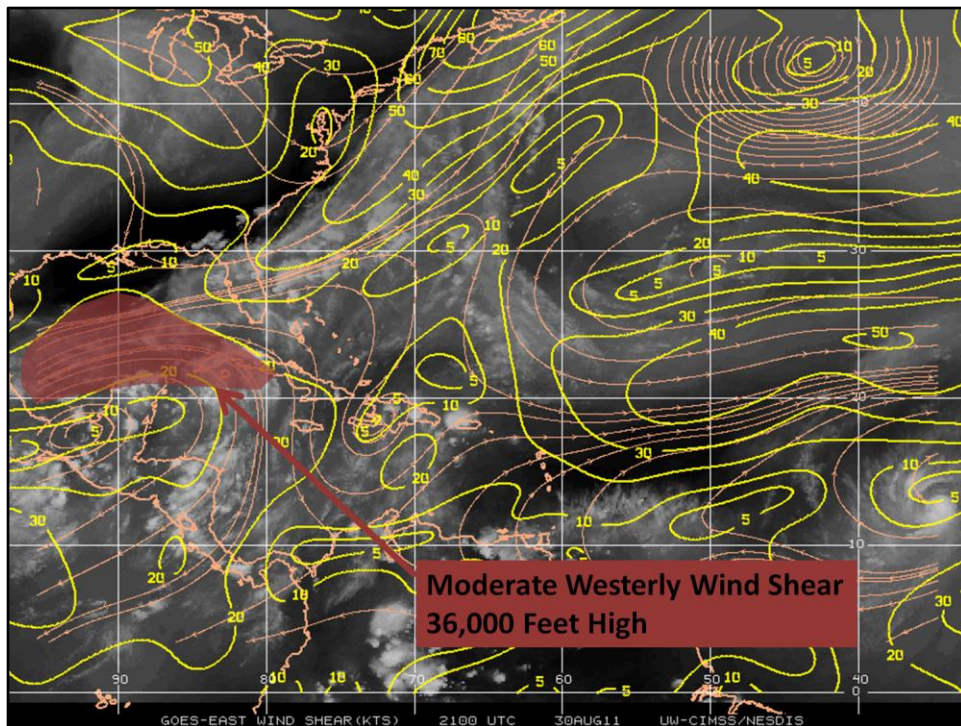
Those initial clouds in the Western and Central Gulf will bring some welcome rains, especially Thursday. Beyond Thursday, we'll have our eyes on the "blob" moving northwest out of the Caribbean. This blob will run across an area with both favorable and unfavorable potential for development.



It's plenty warm in the Gulf! Sea Surface temperatures are at their seasonal peaks near 90°F in many locations.



Oceanic Heat Content can be a good indicator of rapid development of hurricanes, all things being “in line”. There’s plenty in the west central Gulf (large red area) and pockets of moderate high levels just east of the Texas coast.

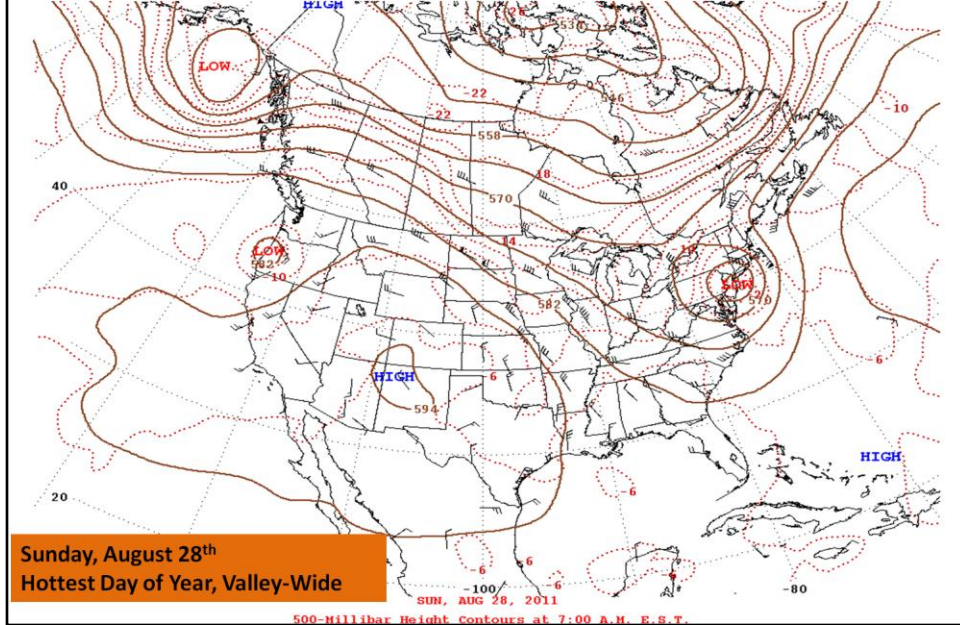


The moderate shear is expected to remain over or near the west/central Gulf through the weekend. Such shear would be unfavorable for any rapid development of a tropical system.

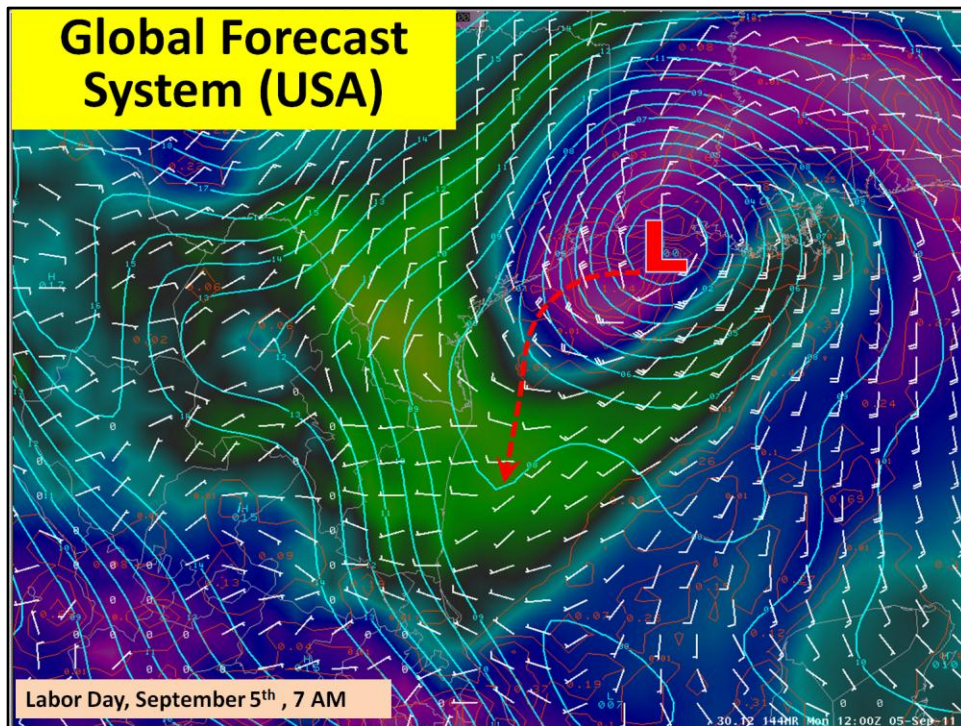
Regional and Global Model Data

- Answers are all over the place!
- Much will depend on how long any circulation can “fester” in the western Gulf
- Much will depend on the strength of “La Canicula”
- “La Canicula” is the persistent core of high pressure which has had a vice grip on our hot and dry summer

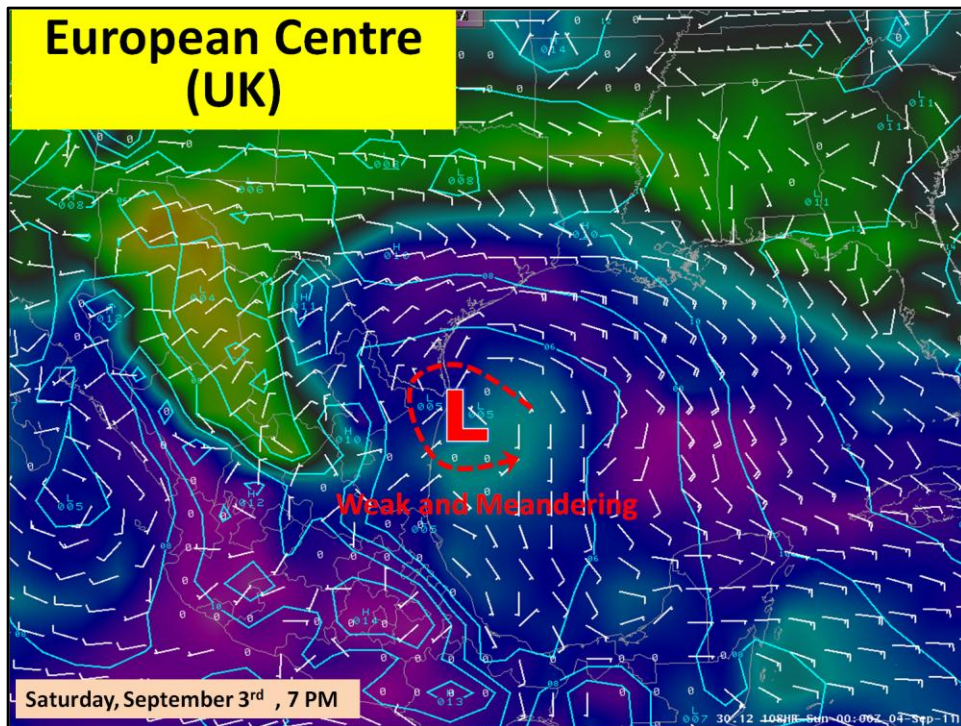
“La Canicula” (The Dog Days)



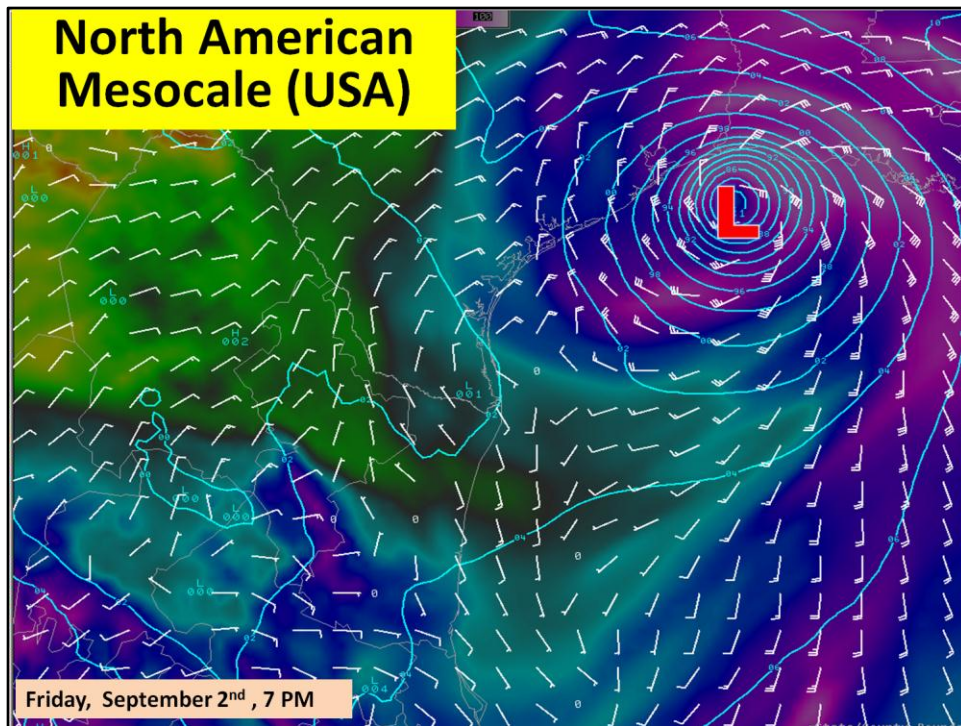
Very hot and dry air circulated around the east side of the “High”, located across the southwest U.S., on August 28th and 29th. Similar heat was felt often this summer with little rain as this ridge of high pressure remained anywhere from the Rockies to the Ozarks, always extending south into Texas.



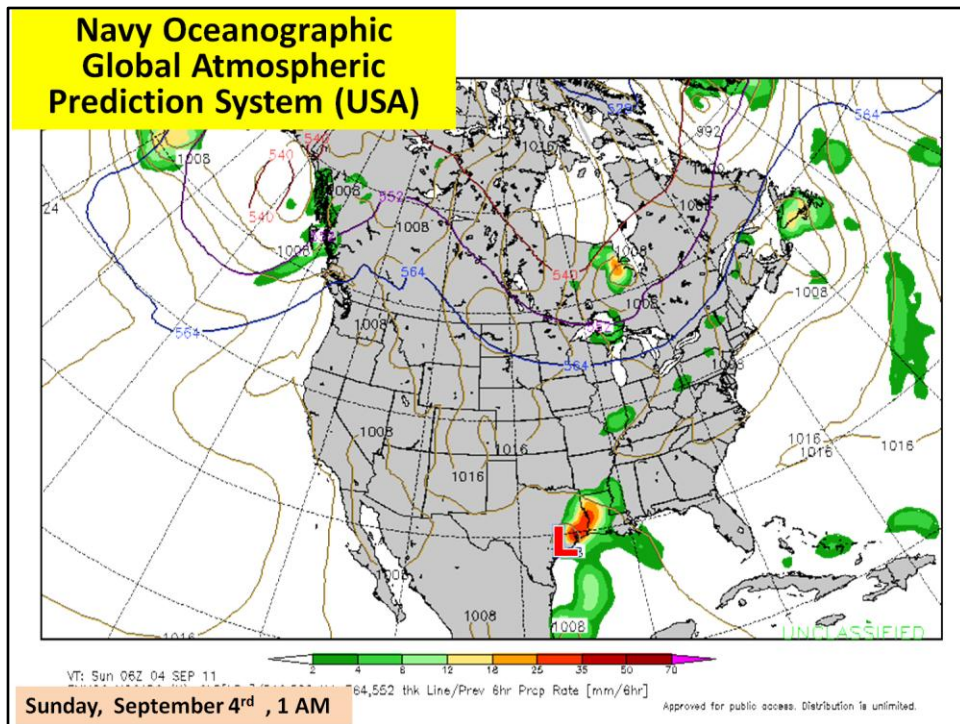
This forecast would suggest record heat and plenty of sunshine for Sunday, September 4th and Labor Day, September 5th (north winds; yellow colors indicating dry air). Louisiana and Upper Texas coast would be under threat from the cyclone. This model suggests an odd movement Tuesday and Wednesday (through September 7th) just east of the entire Texas coast, headed toward Tampico. The odd movement is not out of the question should the Canicula ridge “steer” the cyclone around its periphery.



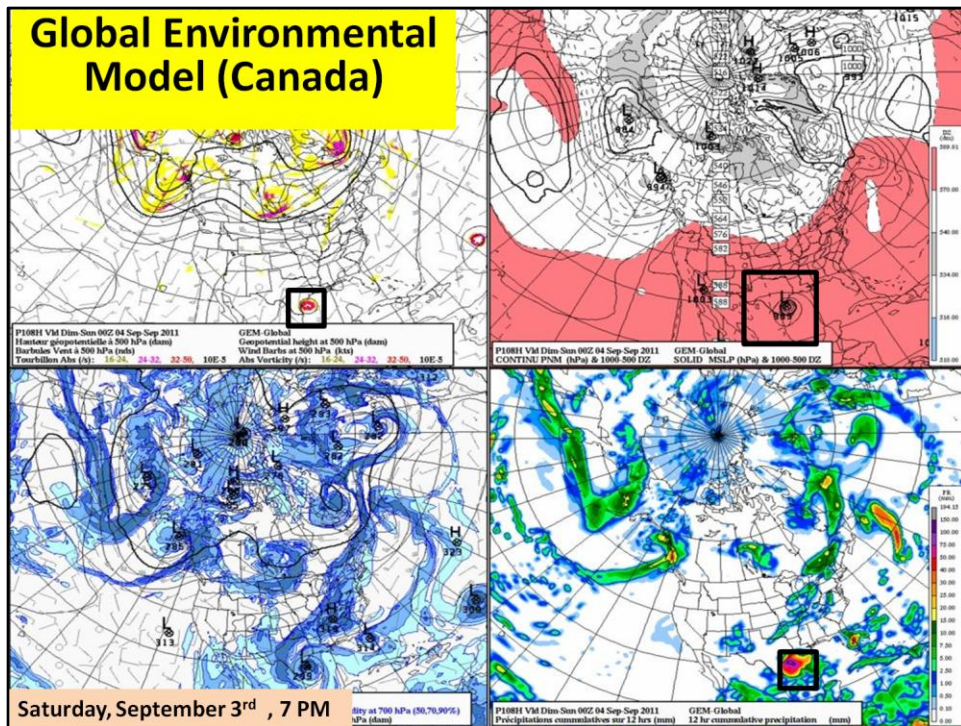
This model shows an open wave with a meandering motion. Deep tropical moisture associated with the flatter “wave” would bring much needed rain and lower temperatures to the Valley for much of the Labor Day Weekend.



This model has a difficult time resolving the forest for the trees, in a literal sense. The very fine grid allows the model to handle details of afternoon sea breezes, shallow cold fronts, and the like. Because it is geared for small scale events, it can quickly “wrap up” a small circulation into a dangerous looking storm – in this case, a tightly wrapped hurricane just south of Beaumont/Port Arthur as early as Friday evening. This is the most unlikely solution and we typically discount these.



At one time, the “NOGAPS” was one of the best models for hurricane forecasting. Other models have since surpassed the NOGAPS in terms of accuracy. Still, in a non-hurricane situation, NOGAPS can offer some clues. In this case, the position and timing is similar to the Global Forecast System (three slides earlier). Note the dry air over south Texas with the heavy precipitation area along the Upper Texas coast and Louisiana.



The “Canadian” model has been advertising a rapidly developing tropical cyclone in the western Gulf on Friday, pushing onshore in South Texas on Saturday, for the past few days. While this is possible, it is not the most logical solution given the amount of westerly shear expected over the Gulf into the weekend. The position of the “landfall” has varied from northern Tamaulipas to Corpus Christi with each model cycle.

Possible Outcomes for Labor Day Weekend

- **The Dry:** Cyclone forms in west central Gulf then meanders offshore or moves inland north of the Valley.
 - Return of the Heat; 100+ degrees likely.
 - Big Surf and Rip Currents Likely; Beach erosion and coastal flooding possible if flow from northeast vs. from northwest
- **The Wet:** Wave remains “open”, allowing moisture to circulate in a broad sense covering all of South Texas
 - Possible Drought-Denter, with several inches of rain
 - Maybe light rain only if atmospheric flow at all levels remains northerly
 - Not so hot (80s/lower 90s) with clouds
- **The Stormy:** Wind shear weakens enough to allow for rapid development over the pocket(s) of Oceanic Heat Content, and system edges onto the South Texas coast, perhaps as far south as northern Tamaulipas
 - Coastal Flooding/Possible Storm surge
 - Very Heavy rains moving inland with widespread flooding
 - Hurricane Force winds possible on coast with tropical storm force a little ways inland
 - Event would favor tail end of holiday weekend or early next week

**Stay Tuned, and Stay
Prepared!**

